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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,532	07/08/2005	Akira Kasuya	0020-5392PUS1	1483
2292 7590 10/21/2008 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER COLE, ELIZABETH M				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
10/21/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

### Office Action Summary

**Application No.**

10/541,532

**Applicant(s)**

KASUYA ET AL.

**Examiner**

Elizabeth M. Cole

**Art Unit**

1794

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2, 5 and 7-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2, 5, 7-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 5, 7-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroiwa et al, U.S. Patent Application Publication No. 2001/0006866 in view of Nakamura et al, U.S. Patent No. 6,641,763 and Brunner et al, U.S. patent No. 5,452,507. Kuroiwa et al discloses a multiaxial laminated nonwoven fabric comprising layers comprising tows. The tows correspond to the claimed multifilament yarns. The tows may comprise conjugate fibers having lower melting sheaths and higher melting cores and may be made from polyolefins. See paragraph 0025 and paragraph 0082. The different layers each comprise a plurality of the tows arranged in parallel with each other within each layer. The tows can comprise either the warp or the weft, depending on which layer they are in. See figures. The layers are laid at angles to each other which meets the limitations of claims 12-13. See paragraph 0036. Kuroiwa et al differs from the claimed invention because while Kuroiwa et al teaches employing polyolefins generally, it does not specifically teach the claimed composite structure of the fibers. Nakamura teaches that it is known to form conjugate fibers having polyolefin as both the sheath and core. See examples. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed the

particular conjugate fibers of Nakamura in the invention of Kuroiwa et al, motivated by their art recognized suitability for the intended purpose.

3. Kuroiwa et al also differs from the claimed invention because it does not teach the claimed fibers, although it does teach high strength fibers such as aramid fibers and ultra high strength polyethylene fibers can be used in some layers. Brunner et al teaches that carbon, glass, aramid and boron fibers are recognized in the art as equivalent to the high strength polyethylene fibers and aramid fibers disclosed in Kuroiwa. See col. 3, lines 5-16. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed the equivalent fibers disclosed by Brunner et al in the material of Kuroiwa, in view of their art recognized equivalence. An express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. In re Fout, 675 F.2d 297, 213 USPQ 532 (CCPA 1982).

4. With regard to the limitation that the fibers are thermo-compressed to form the sheet shape, Kuroiwa teaches laminating the layers by heat and pressure. See paragraph 0065.

5. Applicant's arguments filed 7/23/08 have been fully considered but they are not persuasive. Applicant argues that Kuroiwa does not teach that the fiber yarns can form a sheet shape. However, Kuroiwa teaches employing unbonded tows which by definition are substantially without twist. Therefore, once the unbonded tows of Kuroiwa are subjected to thermal pressing as set forth in 0065, they would take on and maintain

a sheet shape, especially since Kuroiwa employs polyolefin fibers which would soften and bond during heating and compressing.

6. Applicant argues that the teaching of Kuroiwa at paragraph 0065 is not for thermo compression. However, Kuroiwa states that the layered fabrics can be subjected to thermal pressing which is equated to thermo compression.

7. Applicant argues that the instant invention produces fabrics having a very low basis weight. However, the instant claims do not recite a basis weight and therefore this argument is not commensurate in scope with the claims.

8. Applicant argues with regard to claim 16, that the cited art does not recite the claimed degree of flatness. However, since Kuroiwa teaches employing tows which are not bonded or twisted and then thermally pressing the layered tows to form a laminate, it is reasonable to presume that the fiber tows of Kuroiwa would take on a flat shape and that the degree of flatness could be controlled by controlling the heat and pressure in the thermal pressing step in order to arrive at a flat, smooth and even laminate.

9. Applicant argues that the prior art does not provide benefits such as freedom from voids and absence of water absorption properties as the claimed invention does. However, the instant claims do not recite that the material is free from voids or does not have water absorption properties and therefore these arguments are not commensurate in scope with the claims.

10. Applicant's amendment has overcome the 112 2<sup>nd</sup> paragraph rejection.

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

The examiner's supervisor Rena Dye may be reached at (571) 272-3186.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

/Elizabeth M. Cole/  
Primary Examiner, Art Unit 1794

e.m.c